

Two glass sheets are moved in a horizontal direction between a first stage and a second stage by a pushing and pulling device while having a certain gap maintained between the two glass sheets by a holder and having lower edge surfaces of the two glass sheets supported by a guide. A die is provided between the first stage and the second stage so as to be movable in a vertical direction. A resin material is injected in a peripheral edge between the two glass sheets by injecting the resin material from 10 the die onto the peripheral edge between the glass sheets while carrying out alternatively the horizontal movement of the two glass sheets and the vertical movement of the die. A double glazing unit is prepared by forming a resin spacer in the peripheral edge between the two glass 15 sheets while maintaining the certain gap between the two glass sheets.